

REMARKS

Claims 1, 4-12 and 15 remain in this application, with Claims 1 and 12 being in independent form. The claims are identical to the claims as allowed in the corresponding European patent application.

In the Final Office Action, Claims 1, 4-12, and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Garcia-Luna-Aceves in view of Katz and Jensen. The rejection is respectfully traversed.

The examiner states in the final office action that the step of "resolving time slot allocation conflicts comprising allocating to each one of the two transceiver nodes time slots belonging to a different time slot sub-set of said identical time slot sub-set" is missing from Garcia-Luna-Aceves.

Katz and Jensen do not cure the deficiencies of Garcia-Luna-Aceves.

With respect to Katz, it is being cited by the Examiner as a prior-art reference against the element of allocating time slots to a node based on the node's position in space, namely "periodically identifying a set of space coordinates; and allocating to said each one of said transceiver nodes time slots belonging to the time slot sub-set assigned by said common function to the point in space identified by the periodically identified set of space coordinates," as recited by Applicant's Claims 1 and 12.

It is respectfully submitted that in a hybrid SDMA/TDMA system time slots are assigned to receivers, to receive from a transmitter, based on their relative direction (not their absolute geographic coordinates) with respect to that transmitter. In the applicant's system, time slots are assigned to transmitters, to transmit to anybody within transmission range, in all directions, based on each transmitter's absolute geographic coordinates. In other words, the time slot

assignments in a hybrid SDMA/TDMA system are receiver-directed, and based strictly on the relative direction between each receiver and the transmitter; in the applicant's system, time slot assignments are transmitter-directed, and based strictly on the absolute geographic coordinates of the transmitter. No mention of geographic coordinates (relative or absolute) is made in Katz; the only requirement is that the transmitter has to be able to detect the antenna direction from which each receiver's transmissions are received from, and associate each receiver with the antenna direction its signals are received from.

In summary, hybrid SDMA/TDMA systems allocate time slots to transmitter-receiver pairs based on the receiver's relative direction with respect to each transmitter.

For the aforementioned reasons, Katz fails to disclose the element of allocating time slots to a node based on the node's position in space, namely "periodically identifying a set of space coordinates; and allocating to said each one of said transceiver nodes time slots belonging to the time slot sub-set assigned by said common function to the point in space identified by the periodically identified set of space coordinates," as recited by Applicant's Claims 1 and 12.

Furthermore, Katz fails to disclose the step of "resolving time slot allocation conflicts comprising allocating to each one of the two transceiver nodes time slots belonging to a different time slot sub-set of said identical time slot sub-set" which is missing from Garcia-Luna-Aceves. Therefore, Katz does not cure the deficiencies of Garcia-Luna-Aceves.

With respect to Jensen, it is being cited by the Examiner as a prior-art reference against the element of "resolving time slot allocation conflicts comprising allocating to each one of the two transceiver nodes time slots belonging to a different time slot sub-set of said identical time slot sub-set".

It is respectfully submitted that Jensen does not disclose at least the features of the resolving step recited by Applicant's Claim 1, namely, "resolving time slot allocation conflicts occurring when at least two transceiver nodes of said network of transceiver nodes are allocated time slots belonging to an identical time slot sub-set and the distance between said at least two transceiver nodes is less than a predetermined distance threshold, wherein said resolving step comprises the step of allocating to each one of said at least two transceiver nodes time slots belonging to a different time slot sub-set of said identical time slot sub-set." Claim 12 includes similar recitations as Claim 1.

In Jensen, nodes with conflicting minor frames (namely, nodes that are "allocated time slots belonging to an identical time slot sub-set and the distance between said at least two transceiver nodes is less than a predetermined distance threshold") are assigned different minor frames within their major frames to eliminate further collisions (column 18, lines 44-53); in other words, the Jensen resolving step comprises the step of allocating to each one of said at least two transceiver nodes time slots belonging to a different, non-identical time slot sub-set altogether (i.e., different minor frame), changing the original (i.e. identical) time slot sub-set allocation. In contrast, the Applicant's resolving step "comprises the step of allocating to each one of said at least two transceiver nodes time slots belonging to a different time slot sub-set of said identical time slot sub-set," thereby, keeping the original (i.e. identical) time slot sub-set allocation. This is accomplished by dividing the original, identical time slot sub-set into multiple, smaller time slot sub-sets, and having each of the conflicted nodes assign itself a different, smaller time slot sub-set of the identical time slot sub-set. Using the terminology of Jensen, this (i.e., dividing the identical time slot sub-set into multiple, smaller time slot sub-sets) would be equivalent to making the conflicting stations share access of the same (identical)

minor frame, effectively reducing the data rate of each conflicting station by a factor proportional to the total number of conflicting stations, something which is not disclosed, or suggested, or otherwise implied. In fact, the reference teaches away from it by suggesting "a time slot interchange (TSI)".

Furthermore, Jensen fails to disclose the element of allocating time slots to a node based on the node's position in space, namely "periodically identifying a set of space coordinates; and allocating to said each one of said transceiver nodes time slots belonging to the time slot sub-set assigned by said common function to the point in space identified by the periodically identified set of space coordinates," as recited by Applicant's Claims 1 and 12. Thus, Jensen does not cure the deficiencies of Garcia-Luna-Aceves, and Katz.

Therefore, none of the three cited references discloses or suggests at least the resolving feature as recited by Applicant's independent Claims 1 and 12.

In accordance to the above reasons, independent Claims 1 and 12 are patentably distinct and not obvious over Garcia-Luna-Aceves, Katz, Jensen, or the combination thereof. Therefore, the Applicant respectfully requests withdrawal of the rejection with respect to independent Claims 1 and 12 and allowance thereof.

Dependent Claims 4-11 and 15 depend from Claims 1 and 12, and therefore are allowable for at least the same reasons given for Claims 1 and 12. Therefore, withdrawal of the rejection with respect to dependent Claims 4 - 11 and 15 and allowance thereof are respectfully requested.

In view of the foregoing remarks and amendments, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1, 4-12 and 15, are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Applicant's undersigned attorney at (631) 501-5706. Please also note the new mail correspondence address below for all mail communications regarding the subject patent application. A change of correspondence address was filed on March 15, 2002.

Respectfully submitted,



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